

## ASCO — AUSTRALIAN STANDARD CLASSIFICATION OF OCCUPATIONS

### INTRODUCTION TO ASCO PUBLICATIONS — FIRST EDITION

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This publication outlines the background to the development of ASCO, the new Australian Standard Classification of Occupations, and describes the purpose and content of the publications which will be produced as ASCO First Edition.

#### Why has ASCO been developed?

ASCO has been developed jointly over a period of several years by the Department of Employment and Industrial Relations (DEIR) and the Australian Bureau of Statistics (ABS).

It has been widely recognised by users in industry and government that previous occupational classifications used in Australia suffered from a number of deficiencies. Against this background, DEIR and ABS decided late in 1978 to proceed with a joint project to develop a standard classification and dictionary of occupational titles and descriptions for use by government bodies and others within Australia.

The classification which has been developed is based on a "kind of work" criterion with an emphasis on skill level (length and type of training) and skill specialisation (e.g. subject matter knowledge).

It has always been recognised by the ASCO Project Team that it will never be possible to design a single occupational structure which meets the needs of all users at all times. Its main objective, therefore, has been to develop a structure for ASCO which will best and most often meet the long-term needs of the most significant users and producers in policy, analysis and statistics.

The first major statistical applications of ASCO are the 1986 Population Census, the Labour Force Survey and the Survey of Employee Earnings and Hours.

#### What are the Objectives of ASCO First Edition?

Two broad objectives have been set for the publication program:

- to have ASCO used in job placement activities, labour market analysis and human resource management; and
- to provide a description of ASCO which enables information obtained on characteristics of jobs to be consistently and uniformly classified.

#### What does First Edition mean?

The ASCO publications (including the Dictionary) will be labelled as First Edition. It is anticipated that after some years of use, ASCO may undergo a revision in terms of its structure and be re-issued as a Second Edition. However, within the First Edition, there are likely to be significant additions and amendments made, both to the Statistical Classification publication and to the Coding System publications, as a result of operational experience. It is therefore planned that the publications will be issued as a "first release", foreshadowing a second and possibly third release before the end of 1987.

#### What Publications are being released?

To meet the first objective outlined above, the primary published document is the ASCO Dictionary, to be released in December 1986. The Dictionary, which has been developed as a joint undertaking by DEIR and ABS, provides detailed descriptions for about 1100 distinct occupations covering all jobs in the Australian labour force.

To meet the second objective, ABS has recognised two major uses: first, the need for information on ASCO to assist users to interpret the statistics; second, information for ABS and other agencies and individuals who will be coding according to ASCO in their own collections and wish to follow standard coding rules and guidelines.

For users who wish to understand the structure and content of the classification as an aid in interpreting ABS statistics, the first publication to be released will be the "Statistical Classification". The publication will be released by ABS in September 1986 and may be purchased by completing the order form at the end of this Information Paper.

Available in September, but not to be published until about March 1987, are documents relating to the manual coding of ASCO at the unit group level of the classification. This is the level at which the occupation statistics from the 1986 Population Census and the Labour Force Survey are being coded. Before publication, users can obtain versions of these documents on request from the ABS.

The ABS has also developed, for use in occupation coding for the 1986 Population Census, a computer assisted coding system. The present expectation is that this system will be released for general use late in 1987, with full supporting documentation. Pre-release inquiries about this system will be welcomed.

Many collections, undertaken both by ABS and by other agencies, will not be able to obtain information of sufficient quality and accuracy to enable coding at the unit group level of ASCO. For these collections, the appropriate coding level of ASCO will be at minor group. As a further addition to the "Coding System," ABS will publish, during the latter half of 1987, documents appropriate to coding at the minor group level.

In summary, the ASCO publication timetable following this introductory publication is as follows:

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|--------------------------------------|------------|
| 1. STATISTICAL CLASSIFICATION        | Sept. 1986 |
| 2. ASCO DICTIONARY                   | Dec. 1986  |
| 3. CODING SYSTEM — UNIT GROUP LEVEL  | Mar. 1987* |
| 4. CODING SYSTEM — MINOR GROUP LEVEL | Late 1987  |
| 5. COMPUTER ASSISTED CODING SYSTEM   | Late 1987  |

\* — but available on request from ABS from September 1986.

The purpose and content of each of these publications is as follows.

#### 1. *Statistical Classification.*

This document is intended for users who wish to understand the structure and content of the classification as an aid in interpreting ABS statistics. It is in three parts:

Part One — Conceptual Basis of ASCO — describes the ASCO structure, outlines the history of the development of the classification and explains the underlying concepts.

Part Two — Structure and Group Definitions — is the main part of the document. Its purpose is to enable users to understand the structure of ASCO and thereby to interpret ABS statistics. It also has the subsidiary purpose of providing coding supervisors with a guide to solving coding queries.

Its first two sections are summaries of the ASCO classification criteria and the profile of ASCO. The rest is a textual description of the three group levels (i.e. major, minor and unit groups). At the level of the unit group, detailed information is provided on skill levels required and tasks performed. A list of the occupation titles within each unit group is also provided, including alternative and specialisation titles.

Part Three — Keyword Index of Structure Titles — provides a pathway into the ASCO structure. Its purpose is to enable statistical users to locate all principal, alternative and specialisation titles (and their associated unit group codes) under a particular keyword. For example, the Keyword "Librarian" is shown in the Index as being included in 2799 Medical Record Librarian, 2911 Librarian and 5401 Computer Tape Librarian.

Coding supervisors will also find the Index of use in resolving coding queries.

#### 2. *ASCO Dictionary*

The Dictionary, a joint undertaking by DEIR and ABS, provides detailed descriptions for about 1100 distinct occupations covering all jobs in the Australian labour force.

The purpose of the Dictionary is to enable ASCO to be used in job placement activities, labour market analysis and human resource management. The descriptions in the Dictionary relate to the major, minor and unit groups and occupation levels of the classification. At the occupation level, information is provided on skill levels, tasks undertaken, related occupations and occupation titles which are a specialisation of the particular occupation.

The Dictionary also contains an introduction which describes the ASCO structure in detail, outlines the history of the development of the classification and explains the underlying concepts.

#### 3. *Coding System—Unit Group Level*

The 1986 Population Census and the Labour Force Survey are coding occupations at the unit group level, although for the most part statistics will only be published at the minor group level. The first documents available will therefore relate to the methodology of coding at this level of the classification.

To assist users to code manually at the unit group level of the classification, the Coding System document is in five parts, as follows:

- Part One — Supervisors' Reference Manual
- Part Two — Manual Coding Training Guide
- Part Three — Manual Coding Users' Guide
- Part Four — Coding Index
- Part Five — Coding Index: Numerical Order

The purpose of the Supervisors' Reference Manual is to provide coding supervisors with an understanding of the coding operation and an appreciation of the reasons for the recommended procedures. It also provides supervisors with guidance on how to resolve queries.

The purpose of the Manual Coding Training Guide is to train coders in the recommended procedures for coding responses from censuses and surveys at the unit group level. The material is presented in lesson format in a progressive order of difficulty. The lessons include examples and exercises with answers.

The Manual Coding Users' Guide provides coders who have already been trained in ASCO coding with a quick reference document on coding procedures.

The Coding Index enables coders to code responses at the unit group level. The Index entries are based on responses actually obtained in censuses and surveys. The Index is presented in alphabetical order.

The Coding Index: Numerical Order is to assist supervisors to resolve coding queries. The Index groups all Index entries under unit group codes.

#### 4. Coding System—Minor Group Level

It is appreciated that for many collections coding at the unit group level will not be possible because of the relatively poor quality of the responses to occupation questions. For these collections the most appropriate level of coding will be at the minor group level. The ABS will be producing coding documents for this level of coding during the latter half of 1987.

Resources permitting, ABS will investigate the possibility of developing an automatic coding system for use at the minor group level. This will differ from the Computer Assisted Coding system in that the computer itself will interpret the response and allocate the code. It is anticipated that only in a few cases will the computer not be able to code the responses automatically.

#### 5. Computer Assisted Coding System

The occupation responses on the 1986 Population Census forms are being coded to ASCO using a Computer Assisted Coding system (CAC). Information from a census form is keyed into a microcomputer (Olivetti M24 SP) and its response assists the coder in selecting an appropriate code to be added to the census form for later use in the main processing of the census data. CAC is therefore a coding productivity tool, with each coder using a stand alone microcomputer.

The software is written in Microsoft "C" version 3.0 and runs under MS DOS version 2.11 (or later). It requires 640K of RAM and will run from a floppy disk, although the use of a hard disk will improve the performance.

To train coders in using the CAC system, an interactive microcomputer-based tutorial package has been developed. In addition, there are two supporting documents: the Computer Coding Training Guide and the Computer Coding Users' Guide. These documents serve the same purposes as their manual coding equivalents, described earlier.

It is expected that the CAC system and supporting documentation will be publicly released in late 1987.

**IAN CASTLES**  
Australian Statistician

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N.B. Inquiries concerning the purchase of any of the other documents outlined in this paper may be made by contacting the Supervisor of the ASCO Project (Dr Graeme Vaughan — (062) 52 5757) C/- P.O. Box 10, Belconnen, A.C.T. 2616.